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# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

SHINGUBARA, S. et al.

Atty. Ref.: 925-287

Serial No. 10/809,681

Group: 1762

Filed: March 26, 2004

Examiner:

For: METHOD OF MANUFACTURING MULTILEVEL  
INTERCONNECTION

\* \* \* \* \*

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

## INFORMATION DISCLOSURE STATEMENT

As suggested by 37 C.F.R. 1.97, the undersigned attorney brings to the attention of the Patent and Trademark Office the references listed on the attached form PTO-1449.

☒ All listed documents are attached.  
☐ This application was filed after June 30, 2003 so that copies of U.S. Patent Publications are not required and are not attached.

☒ Listed foreign patent publications and other documents are enclosed.  
☐ The partial translations were provided to the undersigned by the applicants' foreign representative. The undersigned has no knowledge regarding the pertinency of the partially translated portions vis-à-vis the document as a whole. The partial translations are merely provided for whatever convenience they may be.

☐ The listed documents were cited in the ISR and copies should have been supplied by WIPO directly to the US PTO. If copies are not timely received from WIPO, please telephone the undersigned so that copies can be timely supplied for the Examiner's consideration in this US National Phase Application.

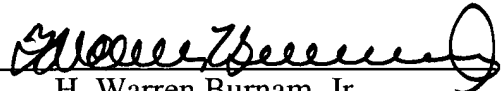
This is not to be construed as a representation that a search has been made or that no better prior art exists, or that a reference is relevant merely because cited.

The Examiner is requested to initial the attached form PTO-1449 and to return a copy of the initialed document to the undersigned as an indication that the attached references have been considered and made of record.

Respectfully submitted,  
NIXON & VANDERHYE P.C.

June 22, 2004

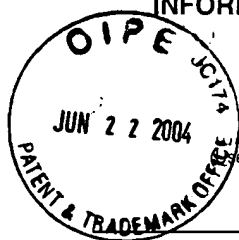
By: \_\_\_\_\_



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**INFORMATION DISCLOSURE  
CITATION**

ATTY. DOCKET NO.

SERIAL NO.

925-287

10/809,681

**APPLICANT**

SHINGUBARA, S. et al.

FILING DATE

**GROUP**

March 26, 2004

1762

## U.S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

**OTHER DOCUMENTS** (including Author, Title, Date, Pertinent pages, etc.)

✓	Shingubara et al, "Effect of Pd Catalyst Adsorption on Cu Filling Characteristics in Electroless Plating", Advanced Metalization Conference, Conference Proceedings ULSI XVI, 2001, Materials Research Society, pp. 229-234
	Wang et al, "Electroless Plating of Copper on Metal-Nitride Diffusion Barriers Initiated by Displacement Plating", Electrochemical and Solid-State Letters, 6 (3), 2003, pp. C38-C41
✓	Wang et al, "Suppression of Native Oxide Growth in Sputtered TaN films and its Application to Cu Electroless Plating", Journal of Applied Physics, vol. 94, no. 7, 1 October 2003, pp. 4697-4701
	Wang et al, "Influence of Surface Oxide of Sputtered TaN on Displacement Plating of Cu", Jpn. J. Appl. Phys., vol. 42, 2003, pp. 1843-1846
	Wang et al, "Highly Adhesive Electroless Cu Layer Formation Using an Ultra Thin Ionized Cluster Beam (ICB)-Pd Catalytic Layer for Sub-100 nm Cu Interconnections, Jpn. J. Appl. Physics, vol. 42, 2003, pp. L1223-L-1225

\*Examiner

Date Considered

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Form PTO-FB-A820 (Also PTO-1449)